

Shale resource data from the greater McArthur Basin

ANZLIC Identifier:	10842E233ED1D2A0E050CD9B21440ECC
Title:	Northern Territory Geological Survey - Shale Resources Dataset
Custodian:	Northern Territory Geological Survey (NTGS) Department of Industry, Tourism and Trade
Abstract:	NTGS has compiled a Territory-wide shale dataset. This dataset has initially focused on the greater McArthur Basin but will extend over time to include other parts of the Northern Territory. The dataset consists of analysis of shales from the greater McArthur Basin that were selected specifically for the purpose of determining the potential for unconventional hydrocarbon resources. The dataset consists of organic geochemistry, physical and mechanical rock properties, kerogen geochemistry and kinetics, bulk and clay mineralogy, fluid extract chromatography, organic petrography, gas geochemistry and reflectance and inorganic geochemistry. This is version 13 of the dataset.
Search Word(s):	petroleum, geoscientific information, greater McArthur Basin, Beetaloo, shale, oil, gas
Bounding Coordinates (GDA94):	North Bounding Coordinate: -11 South Bounding Coordinate: -26 East Bounding Coordinate: 138 West Bounding Coordinate: 129
Reference System Information:	The dataset is supplied in Geocentric Datum of Australia (GDA94), latitude and longitude [EPSG: 4283]
Data Currency Start Date:	04/03/2022
Data Currency End Date:	
Progress:	In Progress
Maintenance and Update Frequency:	As Required
Access Constraint:	The data or product is copyright of the Northern Territory Government. The data and other information may be reproduced or used to develop other products but any such copies or works must acknowledge the Northern Territory Geological Survey, on behalf of the Northern Territory of Australia as the source of the original data or information.
Lineage:	The McArthur Basin is recognised as having potential for petroleum; and both oil and gas are known to have flowed from petroleum wells and mineral exploration drillholes (Munson

2014). An extensive sampling program of legacy cores held at the NTGS core store in Darwin and the Data Repository of Geoscience Australia in Canberra was undertaken in 2014-18. Cores from 149 locations were reviewed. Collated data includes 10147 sample points from the Mesoproterozoic Roper Group and the Palaeoproterozoic units of the McArthur and Limbunya groups. This program has increased the sampling frequency for the organic geochemistry of the shales of the Roper, Limbunya and McArthur groups and has resulted in a reduced sampling interval of between five to ten metres through the shale intersections. The suite of analyses of these samples includes total organic carbon content, programmed pyrolysis, bulk and clay mineral content, kerogen kinetics and elemental kerogen analysis, shale rock properties, organic petrography, whole rock geochemistry, mechanical rock properties, gas chromatography and biomarker analysis and gas geochemistry. These analyses are essential to determine areas of greater potential for hosting shale petroleum plays as defined by key parameters. The data from the newer sampling analyses has been combined with legacy data compiled from open file company reports to form an integrated properties dataset.

Positional Accuracy:	Positional accuracy is dependent on the quality of the source dataset and is highly variable.
Attribute Accuracy:	Attributes have been derived from multiple sources as per the Shale Resource Assessment project requirements. Some interpretation of company provided data has been required to equate to NTGS formats, structures and definitions. Further review of the data, structure and alignment and integration with other NTGS datasets is probable in the future.
Logical Consistency:	Internally consistent with source datasets and adapted to meeting the Shale Resource Assessment project requirements. Further review of the data, structure and alignment and integration with other NTGS datasets is probable in the future.
Completeness:	The data is complete to the limits of available data. It is an ongoing dataset that will be continually augmented.
Contact Organisation:	Northern Territory Geological Survey GPO Box 4550 Darwin NT Australia 0801
Contact Person:	Manager Geoscience Business Systems Ph: (08) 8999 5211 strike.admin@nt.gov.au
Metadata Date:	04/03/2022